

**EXPECTED COURSE OFFERINGS BY SEMESTER IN THE
APPLIED AND COMPUTATIONAL MATHEMATICS PROGRAM**

The schedule below is based on historical patterns and expected scheduling. The semester and location in which a course may be offered *is subject to change* due to instructor availability, student demand, and the need to provide an appropriate balance of subjects and course levels in all semesters. Courses may be offered at the Applied Physics Laboratory (APL) (A), online (O), or Virtual Live (VL)¹, as indicated. Research courses 625.800–808 are held at locations of mutual convenience to the student and instructor. A version of this schedule (not always the most recent) is available at <https://ep.jhu.edu/student-services/academic-services/course-planning/schedule-planning-information>.

Course 625.xxx	Summer	Fall, Odd Years	Spring, Even Years	Fall, Even Years	Spring, Odd Years
201–General Applied Math ²	O	O		O	
250–Multivariable & Complex Anal. ²		O		O	
251–Intro. Ordinary & Partial Diff. Eqns. ²			A		A
260–Intro. Signals and Systems ²		O		O	
601–Real Analysis					A
602–Modern Algebra		A			
603–Statistical Methods & Data Anal.	VL and O	VL and O	A and O	VL and O	A and O
604–Ordinary Differential Eqns.	O		O		O
609–Matrix Theory	A	A and O	O	A and O	O
611–Computational Methods		O			
615–Intro. Optimization ³		O	O		
616–Optimization in Finance ³					O
617–Combinatorics ⁴			A		A
620–Math. of Signal Processing	A (odd yrs.)				
623–Probabilistic Models				O	
633–Monte Carlo Methods ⁵			O		O
636–Graph Theory	A (even yrs.)				
638–Neural Networks ⁶		A	O	A	O
641–Math. of Finance: Invest. Science	O				
642–Mathematics of Risk			A		
661–Statistical Models & Regression ⁷	O		VL and O		O
662–Design of Experiments					A
663–Multivariate Statistics				A	
664–Computational Statistics		O		O	
665–Bayesian Statistics ⁸	VL				
680–Cryptography				A	
685–Number Theory			A		
687–Applied Topology ⁹					A
690–Computational Complexity					O
692–Probabilistic Graphical Models ¹⁰			O		
695–Time Series & Dynamic Models		O			

Course 625.xxx	Summer	Fall, Odd Years	Spring, Even Years	Fall, Even Years	Spring, Odd Years
703–Complex Variables ¹¹	VL (even yrs.)				
710–Fourier Analysis			A		
714–Stochastic Diff. Eqns.	O				
717–Partial Differential Eqns.				VL	
718–Nonlinear Differential Eqns.		VL			
721–Stochastic Processes I	A (odd yrs.)	A			
722–Stochastic Processes II			A		
725–Theory of Statistics I	O (even yrs.)			O	
726–Theory of Statistics II					O
728–Theory of Probability			A		
734–Queuing Theory ¹²			A		A
740–Data Mining		O		O	
741–Game Theory ¹³				A	
743–Stochastic Optimization					A
744–Modeling & Monte Carlo		A			
800–Independent Study ¹⁴	--	--	--	--	--
801–802 ACM Master's Research ¹⁵	--	--	--	--	--
803–804 ACM Master's Thesis ¹⁶	--	--	--	--	--
805–806 ACM PMC Research ¹⁷	--	--	--	--	--
807–808 ACM PMC Thesis ¹⁸	--	--	--	--	--

NOTES:

¹VL classes are designed to support both remote students and those local to Maryland. In VL classes, students have the option of attending an in-person class lecture or an online class session. The in-person class will be held at APL in Laurel, Maryland. The virtual students will connect via a web conferencing tool enabling two-way voice communication and live video feed with the on-site course. Students who have video enabled computers will be able to share video of themselves with the classroom and other virtual students, if desired. This format enables students to attend the class from remote locations while still participating in live interactions with the instructors and other students. Live sessions will be recorded. Students who are unable to participate at the specific time the class session is held will be able to replay the recording of the class session, which includes the lectures, discussions, and video.

²200-level courses are not for graduate credit. Note that 625.250 will be offered virtual live in fall 2017 and fully online in fall semesters of subsequent years, beginning 2018 (625.251 will remain an in-person course for now). Courses 625.250–251 have also been newly renamed in order to be more descriptive of the content than the former names, Applied Math I and II.

³Students may not take both 625.615 and 625.616 for credit; students may only take one or the other for credit (not both).

⁴Course is co-listed in the Computer Science Program as 605.623.

⁵625.633 is offered in an online format beginning spring 2018.

⁶Course is co-listed in the Computer Science Program as 605.647.

⁷625.661 will run online in spring semesters of even years, beginning spring 2018.

⁸625.665 is a new course that is planned for the summer semester of every year, beginning summer 2018.

⁹Course is co-listed in the Computer Science Program as 605.628.

¹⁰Course is co-listed in the Computer Science Program as 605.625.

¹¹625.703 will run in VL format for summer 2018, and is expected to be fully online, beginning summer 2020.

¹²Course is co-listed in the Computer Science Program as 605.725.

¹³Course is co-listed in the Computer Science Program as 605.726.

¹⁴625.800 may be taken only near the end of an M.S. program of study; requires ACM faculty supervisor.

¹⁵See information at <https://ep.jhu.edu/files/acm-research-thesis.pdf>.

¹⁶See information at <https://ep.jhu.edu/files/acm-research-thesis.pdf>.

¹⁷For students in the post-master's certificate (PMC) program. See information at <https://ep.jhu.edu/files/acm-research-thesis.pdf>.

¹⁸For students in the post-master's certificate (PMC) program. See information at <https://ep.jhu.edu/files/acm-research-thesis.pdf>.